REMARKS

The Office Action dated May 3, 2006 has been reviewed and the application as amended in a manner believed to place same in condition for allowance. Reconsideration of the application is requested.

The attached Information Disclosure Statement (IDS) cites patents that may be of some interest with respect to Applicants' claimed invention, including patents directed to automatic pump control features.

Returning to the amendments, in summary, Claims 1-51, 53 and 54 are canceled, Claims 52, 55, 56, 58, 59, 61, 64-67 and 69 are amended, and Claims 73-78 are newly added.

Claim 1 has been cancelled in order to advance prosecution. Thus, the double patenting rejection of Claim 1 in view of Claim 1 of parent U.S. Patent No. 6 652 488 (the '488 Patent) and the rejection of Claim 1 as being anticipated by Zinnanti, U.S. Patent No. 5 348 555 no longer apply and will not be discussed herein.

The rejection of Claims 43-72 on the ground of non-statutory obviousness-type double patenting as being unpatentable over Claims 22-24, 36 and 42 of the '488 Patent has been considered. In view of the attached Terminal Disclaimer, withdrawal of the obviousness-type double patenting rejection is respectfully requested.

In order to advance prosecution, Claims 43-51, 53 and 54 have been cancelled. Therefore, the rejections of these claims will not be discussed herein.

Claims 58-64 and 69-72 stand rejected under 35 USC §102(b) as being anticipated by Zinnanti.

Zinnanti discloses an endoscopic suction, irrigation and cautery instrument that includes a housing 12 having a nipple 68 for connecting a suction device to a main passage 30, and a nipple 66 for connecting an irrigation device to the main passage. Zinnanti also discloses an actuator button 98 that linearly moves a valve plunger 78 and an actuator button 100 that linearly moves a valve plunger 80. A rotatable adjustable stop nut 96 can be selectively adjusted so that the valve plunger 80 cannot open completely to provide a maximum amount of suction during use.

In operation, the button 98 of Zinnati is operated to provide irrigation fluid through the main passage. Upon release of the button, the valve closes to prevent flow therethrough. Likewise, the actuator button 100 provides suction to the main passage when pushed and spring bias returns the valve plunger to close the flow path when the button 100 is released. Movement of the adjusting nut 96 merely reduces the amount of suction applied during a push of the actuator button 100.

The instant invention as defined in Applicants' Claim 58 includes a suction flow control assembly comprising "a first, relatively high rate, suction flow path between said suction port and the third port" and "a second, relatively low rate, suction flow path separate from the first suction flow path and located between said suction port and the third port".

As illustrated in Figure 9 of Zinnanti, the valve plunger 80 of the suction flow control assembly includes a single cross bore 88 that provides a suction flow path between a suction device and the main passage 30. Thus, a "separate" suction flow path as recited in Applicants' Claim 58 is not disclosed or suggested by Zinnanti.

Applicants' Claim 59 further recites "a first suction valve for said first suction flow path and a second suction valve for said second suction flow path". As discussed above, Figure 9 of Zinnanti discloses a single cross bore 88 for the valve plunger 80 that provides a single suction flow path.

Applicants' Claims 60 and 64 both recite that the first suction valve comprises a "reciprocating valve" and that the second suction valve comprises "a rotating valve". The valve plunger 80 illustrated in Figure 9 of Zinnanti may be considered a reciprocating valve. The rejection, however, relies on the adjusting nut 96 of Zinnanti for the disclosure of a rotating valve. While the adjustable stop nut 96 is rotatable, it is not a "valve", but rather simply adjusts the length of operation for the valve plunger 80.

Claims 61-63 are believed allowable for the reasons set forth above with respect to Claim 60.

Applicants' independent Claim 69 recites a surgical suction control handpiece including a first suction valve actuator "having a full open position corresponding to a relatively high suction flow" and "a second suction valve actuator independent of said first suction valve actuator and having a full open position corresponding to a relatively low suction flow rate".

As discussed above, Zinnanti discloses a valve plunger that acts as a first suction valve actuator having a full open position corresponding to a relatively high suction flow. Zinnanti, however, does not disclose or suggest a second suction valve actuator "independent of said first suction valve actuator". The adjustable stop nut 96 of Zinnanti is not a valve actuator at all, but merely provides a stop that limits an operating stroke for the valve plunger 80.

Applicants' Claim 70 recites "first and second suction valves" associated with the respective first and second suction valve actuators. As discussed above, the valve plunger 80 of Zinnanti acts as a single suction valve. No other suction valve is provided, as the adjustable stop nut 96 merely affects the operating stroke length of the valve plunger 80.

Applicants' Claim 71 recites "first and second suction paths respectively through said first and second suction valves". As discussed above, Zinnanti only discloses a single suction valve having a single suction path through cross bore 88. Thus, Zinnanti does not disclose a second suction valve, much less a second suction path.

Applicants' Claim 72 recites a reciprocable actuator and that "said second suction valve actuator comprises a rotary actuator". As discussed above, the rotatable stop nut 96 of Zinnanti is not a valve actuator, but instead limits the operation of valve actuator push button 100. Therefore, Zinnanti does not disclose the second valve actuator, much less a rotary actuator.

In view of the above, Claims 58-64 and 69-72 are believed allowable over Zinnanti, and reconsideration and withdrawal of the instant rejection is accordingly requested.

Claims 55-57 stand rejected under 35 USC §103 as being unpatentable over Zinnanti in view of Saravia, U.S. Patent No. 5 484 402.

Zinnanti is discussed above. Saravia discloses at column 14, lines 56-63 a surgical suction irrigator that has a control means (rocker) with a first actuated position that substantially simultaneously opens a valve means to flow irrigation liquid through a handpiece and closes a switch SW to energize a motor of a pumping member. Saravia further discloses utilizing the rocker 290 to operate a suction device.

Applicants' Claim 55 recites a surgical suction irrigation handpiece including a suction flow control assembly. The suction flow control assembly includes "a hand engagable, reciprocating member" and a "rotating member comprising a rotatable valve element". As discussed above, Zinnanti discloses a rotatable stop nut but not a rotatable valve element, and Claim 55 is therefor believed allowable thereover.

Claim 56 is believed allowable for the reasons set forth above with respect to Claim 55.

Applicants' Claim 57 further recites that the "rotating valve element has an open position defining a suction flow bypass around said reciprocating valve element". As discussed above, Zinnanti does not disclose a flow bypass around the valve plunger. Therefore Claim 57 is believed allowable.

Claims 65-68 stand rejected under 35 USC §103 as being unpatentable over Zinnanti in view of Saravia.

Applicants' Claim 65 recites a liquid valve that has "partially closed positions corresponding to said de-energized condition of said pump unit that provide gravitational pressure irrigation liquid to said conduit". This feature is not present in Saravia, as Saravia operates the pump to apply pressure upon any opening of the valve to supply irrigation liquid through the handpiece. Zinnanti does not disclose the operation of a pump unit. Therefore, even if Saravia were combined with Zinnanti, which Applicants' disagree with, the invention of Applicants' Claim 65 would not result.

Claims 66-68 are believed allowable for the reasons set forth above with respect to Claim 65.

Added dependent Claim 78 is believed allowable for the same reasons as parent Claim 65. Claim 78 further recites that the "irrigation flow control actuator comprises a push button that closes an electric switch to energize said pump unit when said liquid valve is about 1/3 open". There is no disclosure of preventing actuation of the pump unit of Saravia when the irrigation valve opens, much less preventing operation of the pump unit until the valve is 1/3 open. Applicants' invention has the advantage of supplying a small amount of irrigation fluid using gravitational pressure upon weak depression of the actuator.

Amended independent Claim 52 includes features from cancelled Claim 54, which was rejected over Zinnanti in view of Saravia.

Claim 52 now recites "said normally open condition of said switch contacts corresponding to a first part of said range of valve member positions excluding a fully open position".

This feature is not disclosed by the applied prior art. As discussed above, Saravia does not disclose or suggest preventing actuation of a pump unit (prevent closing of switch) for any range of valve member positions. In Saravia, the switch closes and the pump operates when the valve opens.

For the above reasons, Claim 52 is believed allowable over Zinnanti in view of Saravia.

Added independent Claim 73 is also believed allowable over the prior art. Claim 73 recites a first flow control actuator and a second flow control actuator, "the second flow control actuator maintaining a selected fluid flow rate when said second flow control actuator is released". This feature is not disclosed or suggested by Zinnanti, which utilizes springs to close the respective valve plungers bores upon release of the actuator buttons. Further, Saravia discloses a rocker 290 that is biased to a central off position providing no fluid flow.

For the above reasons independent Claim 73, and Claims 74-77 dependent therefrom, are believed allowable over the prior art.

In view of the above, the instant application is believed to be in condition for allowance, and action toward that end is respectfully requested.

Respectfully submitted,

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